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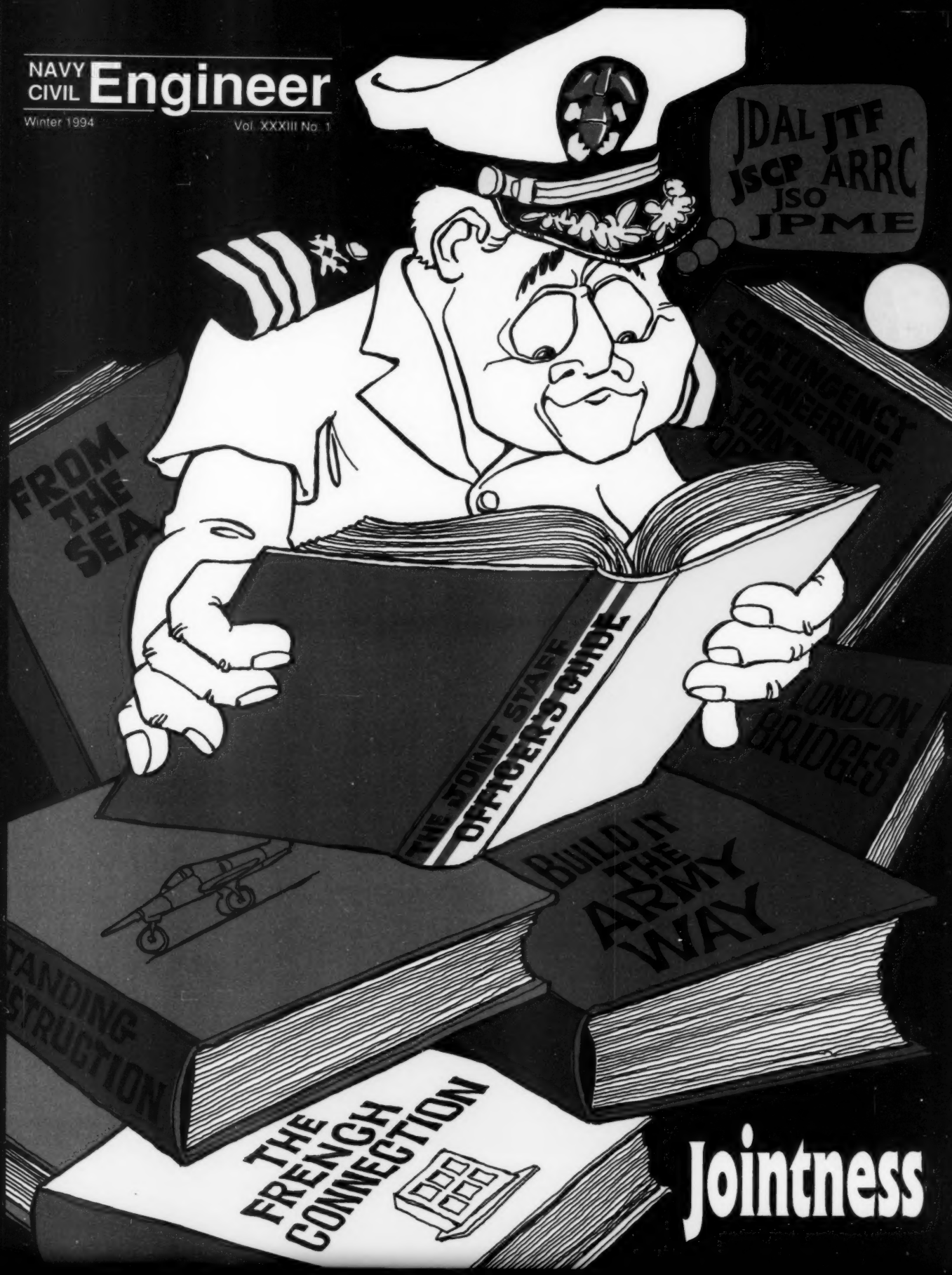

Congratulations CECOS!

The Naval School, Civil Engineer Corps Officers achieved a milestone on Oct. 1, 1993, when it graduated basic class number 200. In honor of this historic occasion, the *Navy Civil Engineer* is publishing photos of basic classes one and 100 (inside back cover). See if you can recognize any friends or colleagues in the photos. For a brief history of CECOS and a look at basic classes 200 and 201, turn to the articles beginning on Page 21.

CECOS Basic Class One

Dec. 14, 1951

First row, from the left: ENS Richard W. Burger, ENS Richard E. Klusman, ENS Frank L. Diver III, ENS Horace W. Latimer Jr., ENS Robert E. Huie, ENS David E. Carr and ENS R.C. Parker.

Second row: ENS Joe L. McKinstry, ENS Phillip R. Jones, ENS Thomas P. Groome Jr., ENS Peter Kirby, ENS David L. Steinheimer, ENS Robert E. Melbourne and ENS Roy W. Banwell Jr.

Front cover art by Bill Brack, Naval Facilities Engineering Command Headquarters, Alexandria, Va.

NAVY CIVIL Engineer

Winter 1994 Vol. XXXIII No. 1

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The *Navy Civil Engineer* is intended for the information of regular and reserve personnel of the Civil Engineer Corps, United States Navy, and key civilian employees of NAVFAC, subordinate commands, and other mission-oriented activities.

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Speaking from Topside

"Jointness" is the current buzz word as the Navy, Army, Marines, Air Force and Coast Guard work together as never before. Joint operations are getting more emphasis as our military forces move into the 21st century. In the sea service, ...*From The Sea*, the Navy and Marine Corps' vision, seeks "to prepare naval expeditionary forces that are shaped for joint operations."

One reason for the emphasis on jointness is the shrinking size of our military in the post-Cold War era. Another reason is the increased importance the 1986 Goldwater-Nichols Defense Reorganization Act placed on commanders in chief (CINC) of unified and specified commands such as Central Command, European Command and Special Operations Command. In 1993, a Joint Chiefs of Staff review of the roles and missions of the services directed the Atlantic Command to take on the new mission of preparing CONUS forces for joint operations.

As peacekeeping, humanitarian and disaster relief missions increase, few of the missions are being undertaken as single-service operations. One need only look at operations since Desert Shield and Desert Storm—Provide Comfort in Iraq, Hurricane Andrew recovery operations in South Florida, Restore Hope in Somalia, planning for missions in Bosnia and Haiti—to see this.

The individual military services bring unique capabilities to these joint operations—capabilities that meld with those of other services for a synergistic effect, capabilities that can be tailored to the situation. The Navy has unique capabilities in the Seabees, amphibious construction battalions and underwater construction teams, as well as strong contingency contracting ability.

In January 1994, I participated in a logistics war game at the Naval War College. That war game looked at sustaining our forces, as currently proposed for the year 2001, through two nearly simultaneous regional conflicts, regenerating our losses, and reconstituting a larger force to counter an emerging world threat.

Engineering and construction was identified as one of eight pillars of support that sustain our operating forces. Specific tasks included in this pillar are combat engineering, infrastructure development, troop and weapons beddown, utilities, lines of communication, specialized construction, hardening of existing facilities, battle damage repair, disaster recovery and decontamination, and environmental protection and recovery.

Participants in the war game included all four military services, plus The Society of American Military Engineers (S.A.M.E.), which represented the civilian construction and architect/engineer community. Inclusion of the civilian sector, as represented by S.A.M.E., in this war game was a significant improvement.

RADM Thomas A. Dames, CEC, USN

One emerging mission for the Civil Engineer Corps (CEC) as a result of this war game is facilities decontamination from persistent chemical agents. By persistent, I mean agents with an effective life of more than several hours or a few days. The capability for decontamination of personnel and rolling stock from short-term agents already exists. Chemical weapons are proliferating and they are becoming easier to deliver, making contamination of support facilities an emerging challenge. Long-term contamination of warehouses, hospitals, supply points and personnel staging areas could have major impacts on our ability to sustain our operational forces.

So what roles will Civil Engineer Corps officers fulfill in joint operations? There are two: engineering and construction, and contracting support and contract administration. CEC officers may be assigned to the staff of the joint task force engineer, or to the staff of the naval component of the JTF.

Engineering and construction may be in support of U.S. forces taking part in the operation. Engineering and construction would involve providing berthing, messing, sanitary and laundry facilities, and utilities for U.S. personnel, as was our task in Somalia. Engineering and construction could also be directed toward rebuilding infrastructure, repairing utilities, roads, bridges, airfields and port facilities, as in South Florida following Hurricane Andrew. Or it could be a combination of the two. Engineering and construction support is usually necessary for coalition military forces, and often necessary too, for civilian casualties, victims, or to assist nation-building.

The Atlantic Division, Naval Facilities Engineering Command was designated the construction contracting agent for Operation Restore Hope. To accomplish this tasking, Captain James S. Spore III, CEC, USN, was on the staff of the Joint Task Force engineer. (For his actions, CAPT Spore was awarded the 1993 Moreell Medal by S.A.M.E.) He was supported by a team of 14 CEC officers and NAVFAC civilians, and several Army Corps of Engineers officers and civilians. Everyone was a volunteer, and the officers came from both active and reserve components. The contract vehicle was an Army Corps of Engineers contingency contract with Brown and Root Services Inc. During four months in Somalia the LANTDIV team completed more than 140 contract taskings totaling more than $40 million. Brown and Root operated camps, provided shelter, sanitation, food and laundry service for U.S. forces. The contractor also repaired buildings, port facilities, the airport, and roads so relief supplies could be received and distributed.

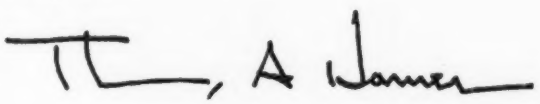
Use of a civilian contractor is an important tool, but not a cure-all. Because Somalia was relatively secure when the U.S. operation began, Brown and Root supported the Seabees and actually enabled them to redeploy early.

Any planning for future operations must be able to count on robust use of the reserves. Reserve CEC officers and Seabees can be a real force multiplier. Our reserve naval mobile construction battalions demonstrated they were trained and ready when called upon to backfill for active battalions deployed to Desert Shield. They proved so successful that both the Atlantic and Pacific Fleets have integrated active and reserve Seabees into single brigades. Reserves also provide a valuable asset for real life planning. Engineering Field Activity Mediterranean used CEC reservists to do much of the planning for possible involvement in Bosnia.

How should a CEC officer prepare for joint duty? The best way is to study and learn. Understand Joint Task Force organization and operations. The organization is not that different from a Seabee battalion, although the terminology is different. A good source is the *Joint Staff Officer's Guide*, the "purple book" used by the Armed Forces Staff College and other service schools. Take the opportunity to attend a joint service school. Learn about our sister services and their service cultures, what their engineering capabilities are and how they are employed. Another way to prepare is to get some joint experience. Take an assignment on a joint staff, or volunteer for temporary duty on a joint exercise or training deployment.

Contingency contracting used in most of these situations is quite different from contracting experience gained at an engineering field division or resident officer in charge of construction office. Disaster recovery and humanitarian operations are usually accomplished under austere conditions with limited resources, where letter contracts and indefinite quantity contracts are the norm. The pace is intense—day/night shifts, battle staff briefs every 12 hours, catnaps and meals ready to eat are the norm.

Go joint!



THOMAS A. DAMES
Rear Admiral, CEC, USN
Commander, Atlantic Division
Naval Facilities Engineering Command

Special Jointness Issue

This issue of the *Navy Civil Engineer* magazine features jointness—its challenges, rewards and roles in military operations.

The training, education and preparation for holding a joint duty billet are discussed in *The Challenges and Rewards of Joint Duty for the CEC Officer* (beginning on Page 4) and *The CEC and Joint Duty* (beginning on Page 12). Additionally, two Civil Engineer Corps officers report on their recent experiences in joint operations. *Planning for Bosnia: A New Role for Military Engineers?* begins on Page 6 and *Operation Restore Hope: The Joint Experience* begins on Page 9.

The Challenges and Rewards of Joint Duty for the CEC Officer

By CAPT Joseph C. Dean, CEC, USN

In today's climate of Department of Defense budget reductions, reorganizations and movement away from duplicated capabilities, the Civil Engineer Corps (CEC) should arm itself with officers who are knowledgeable about practices, philosophies and objectives of the Army, Air Force and Marine Corps, as well as the Navy.

CEC officers familiar with interoperability and the engineering practices of other services, including those from other countries, are prepared to deal with the issues of duplication in contract administration, combat construction and regional engineering support.

The CEC offers assignments with other services that provide an array of challenges. Working facilities and environmental issues at the Office of the Secretary of Defense, coordinating combat engineering support at the Joint Staff, unified or sub-unified command, or constructing and negotiating host nation support for the services "in country" are a few of those challenges.

The joint tour provides an opportunity to work directly for or on the staff of a flag or general officer or civilian equivalent. According to BUPERS 4413 and the general guidelines found in the CEC *Career Planning Guide*, before a commander "zones" for captain, he or she should have served on a staff working with DOD's senior leadership. In a joint billet, the officer might also serve as the staff civil engineer (SCE) for a Navy command. In my career, for example, in addition to my duties at U.S. Forces Korea, I was the SCE for Commander Naval Forces Korea. I had to keep the parochial service requirements in perspective with those of the joint duty assignment.

CAPT Joseph C. Dean is the executive assistant for military construction in the Office of the Secretary of Defense Environmental Security organization. He graduated from the Industrial College of the Armed Forces before serving as chief of Real Estate for the U.S. Forces Korea and alternate chairman of the Facilities and Areas Subcommittee of the United States/Republic of Korea Joint Committee in Seoul.

Joint billets

Many challenges await the CEC officer who serves in one of the 22 joint duty assignments on the joint duty assignment list. Fifty percent of those billets must be filled with a JS3- (an officer who is serving in a joint tour and who has completed joint professional military education) or a JS5- (joint specialty) qualified officer. With few exceptions and in order to be appointed a Joint Staff Officer (JSO), officers must complete joint professional military education and successfully complete a tour on the joint duty assignment list. Phase II of joint professional military education must be completed before the end of the joint tour. Consistent with the law, the full tour must be completed once an officer begins a joint duty assignment. Stringent requirements must be met to serve less than a full tour.

The Goldwater-Nichols Department of Defense Reorganization Act of 1986 established guidelines to ensure that officers serving in joint assignments were not disadvantaged when compared against officers who did not serve in a joint assignment (see *JCS ADMIN PUB 1.2*). Although they do not provide the "joint" credit and promotion tracking that the joint duty assignment list billets do, there are 12 additional billets in other services and agencies that are just as challenging and rewarding as those on the joint duty assignment list.

How important is it for a CEC officer to serve in one of the 34 billets (the 22 joint duty assignment list billets and the 12 others)? Is being a joint specialty officer a prerequisite to becoming a flag officer? Fifty-two officers in the CEC have the JS1 or JS5 qualification. With 34 billets, only a small percentage of the Corps will be able to serve in one of these jobs. The CEC has a "scientific and technical" exemption that excludes it from the requirement for a qualifying joint duty assignment to be promoted to flag rank. The officers who complete a joint duty assignment are tracked in the system for purposes of promotion opportunity. Joint duty is *not* a ticket punch for promotion in the CEC, but large staff (Navy or unified) experi-

ence is essential for professional growth. Completing at least one tour in contract administration, public works and Seabees is advisable before beginning a joint duty assignment.

On a personal level I have found the relationships established while serving at U.S. Forces Korea, Office of the Secretary of Defense and at the Industrial College of the Armed Forces enhanced my understanding of engineers and their capabilities in other services. The dialogues in the joint professional military education are challenging. The personal contacts made and the resulting networking facilitates interservice cooperation. For example, completion of a new communications center for Commander Naval Forces Korea would not have been possible without the support of the Army district engineer at Yongsan, Korea. There are many other success stories on a grander scale in Desert Storm and the Somalia experience. Those endeavors were possible because of the mutual respect and understanding established through association with other services.

Art by Bill Brack

We must approach problems in a joint way... yet represent the CEC capabilities and philosophies.

Challenges

There are subtle challenges here for each officer on joint duty. As Civil Engineer Corps officers, we have the responsibility to approach problems and solutions in a joint way using the best from each service. While we are in these assignments, we can represent the capabilities and philosophies of the Navy as well as the Civil Engineer Corps. The joint officer is often able, because of the proximity to decision-making at high levels, to influence far reaching policies and actions. The challenge is to make the contribution that we are qualified to "bring to the table," while keeping the process in professional perspective and not allowing ourselves to become isolated in independent or purple suit duty.

I have found the responsibility and the relationships exhilarating. At the same time keeping social and professional contact with the Navy and the Civil Engineer Corps have helped me maintain a balanced perspective on my role in the job and my focus on both the joint and service objectives. I highly recommend joint duty to those of you who are interested. The payback can be tremendous and represents an essential capability the Navy and the Civil Engineer Corps needs to logically and knowledgeably address the changes that we are certain to face in the years to come. ❑

For more information on joint duty, read JCS ADMIN PUB 1.2, The Joint Staff Officers Guide and Joint Pub 1: Joint Warfare of the U.S. Armed Forces. Your detailer can give you the latest information and impact of assignment to joint duty. Seek out officers who have served in one of the 34 billets for insights.

An old movie theater, with its roof and windows blasted away, shows the signs of the civil war in Sarajevo. (Photo by John Bohmer, courtesy of *European Stars and Stripes*)

Planning for Bosnia: A New Role for Military Engineers?

By LCDR Robert S. Meyer, CEC, USNR

Dramatic changes in international politics over the last few years have caused a shift in United States military priorities.* The use of expeditionary forces, deployed on a moment's notice and shaped for joint or combined operations in limited intensity conflicts, may become the rule rather than the exception. These changes will present a tremendous challenge to military engineers.

If you have any doubt that change is at hand, just ask Rear Admiral David J. Nash, CEC, USN, commanding officer of Construction Battalion Center Port Hueneme, Calif. On May 9, 1993, with only a few days notice, RADM Nash stepped off a plane in Naples, Italy, and assumed the duties of assistant chief of staff for engineering for a proposed coalition task force to be commanded by Admiral Jeremy Boorda, Commander Allied Forces South (AFSOUTH). RADM Nash's assignment was to provide immediate engineer planning assistance for Operation Determined Guard, a planned multinational peacekeeping effort in Bosnia-Hercegovina.

For some time, NATO's Joint Task Force Provide Promise had been providing logistics air drops to civilians in besieged towns throughout Bosnia, and U.S. Operation Deny Flight had been assuring free air space. Operation Determined Guard would use NATO ground troops to assist in the execution of a United Nations-backed peace plan throughout Bosnia-Hercegovina. It was to be a peacekeeping, not peacemaking operation.

The challenge

Engineers will play a major role in supporting NATO ground operations in Bosnia. The infrastructure in Bosnia had been seriously degraded as a result of both military action and deferred maintenance. Airfields, port facilities, main supply routes, key bridges and utilities had been seriously damaged or destroyed. A huge refugee community would need housing for the winter, and a significant number of unmarked minefields peppered the landscape.

Planning for Operation Determined Guard was hampered by a host of unresolved issues: What nations would participate in the operation and who would command the military forces inserted into Bosnia (NATO, the United Nations, a new coalition force)? To what extent would the engineering mission go beyond support of coalition forces and include humanitarian assistance? Who would fund the engineering effort, and what control would they exert over the scope of work? To what extent would work be accomplished with troop construction assets versus civilian contractors, and to what extent would military engineers manage civilian contracts?

"We didn't know who the participants would be, engineer intelligence was sketchy and existing construction capabilities within Bosnia were minimal," RADM Nash recalls. "Some construction capability was in the form of military forces of the United Nations Protection Force (UNPROFOR) and civilian relief agencies called non-government or-

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LCDR Robert S. Meyer was a member of the NATO planning team at Allied Forces South in Naples, Italy. He is now the commanding officer of Construction Battalion Maintenance Unit 303.

ganizations (NGOs), but these forces were unable to effect infrastructure repair due to limited resources and the continued fighting."

The response

To meet the challenge, a coalition task force engineer planning cell was quickly assembled under RADM Nash. It included Civil Engineer Corps officers recruited from various commands, augmented by Air Force engineers, Army engineers, French engineers and British engineers assigned to the AFSOUTH Infrastructure Branch.

Using the commander's guidance provided by ADM Boorda, RADM Nash and his small staff analyzed the concept of operations, developed an engineering mission statement and recommended a course of action, based upon the following assumptions:

- NATO was to provide the command structure for military operations.
- Coalition forces would be inserted only following adoption of a peace plan.
- Civilian contractors would be used to the maximum extent possible.
- Troop construction assets would be used primarily to support coalition forces and only incidentally to provide humanitarian assistance.

By the end of June 1993, the coalition task force planning staff had completed a major overhaul of the draft civil engineering support plan. They had produced, among other things, an engineering intelligence database, a final draft engineer annex to the operations plan, detailed engineer tasking lists, an estimated material requirements list for prepositioning of common stock materials, a detailed contracting policy, a construction budget and a transition plan for interface between NATO engineer forces and United Nations/NGO construction forces.

A new operating environment

The Bosnian engineer planning effort demonstrated that the increased use of U.S. expeditionary forces in multinational operations is changing the operating environment for military engineers. Engineer planners must adapt if they wish to preserve their role in joint or combined contingency operations. Civil Engineer Corps officers must be aware of these trends in military engineer planning and develop new approaches and new skills, if they hope to participate in future planning efforts. Some of these trends were illustrated in the Bosnia planning efforts. They were:

- *The expansion of traditional NATO planning precepts.* Until planning for the coalition task force began, NATO viewed engineer planning as the responsibility of each member nation. Each nation would plan for support of its own forces, only in defense of the territory of NATO member nations. Now, for the first time, NATO had assembled its own engineer planning staff, to plan for engineer support of coalition forces (some from other than NATO member nations) for an operation outside the territory of NATO member nations. Operation Determined Guard would represent a major expansion of NATO's role, and consequently, required great flexibility and inventiveness on the part of the assistant chief of staff engineer planning staff.

- *The senior engineer as assistant chief of staff.* A unique feature of the planning process was that the senior engineer on staff was not a member of the logistics staff, but rather was designated assistant chief of staff for engineering. This was justified by the key role engineer support was to play in the operation. The designation had a number of important consequences. Removing engineers from under the logistics umbrella freed them from many of the constraints common to a supply-oriented system. For example, construction materials and equipment could now be procured, transported

Devastation resulting from "ethnic cleansing" near Labela, Bosnia-Hercegovina. (Photo by LT Robert G. Fahey, CEC, USN)

and distributed according to a new set of priorities. But some functions had to remain under the control of logisticians. Logisticians had to provide for physical receipt and onward movement of materials and equipment. For this new status to work, close coordination between the engineer and logistics support systems had to be maintained.

• *Integration of engineer forces at the theater level.* Major engineer assets are not normally retained at the theater level in combined operations. In the Persian Gulf conflict, each nation provided its own engineer capability, and there were few combined engineer operations.

In Bosnia, each element of the ground component, called the Allied Forces Europe Rapid Reaction Corps (ARRC), was expected to maintain its own engineer capability at the tactical level. But unlike other operations, the need for common facilities at the strategic and operational levels, within and outside Bosnia, called for establishment of a combined engineer force under the direct control of the coalition task force headquarters. This is the level the Army calls the Echelon Above Corps (EAC).

Engineer tasking was carefully defined for the Allied Forces Europe Rapid Reaction Corps and the Echelon Above Corps between theater engineer assets and corps engineer assets. The allocation was based on strategic and operational requirements, not tactical requirements. This was especially important since the geographical area of responsibility for the ARRC and the EAC substantially overlapped.

Integration of engineer capabilities at the theater level presented an opportunity to make theater engineer assets a true coalition force. The plan allowed for instances where one nation's engineer forces would be commanded by another's.

• *Interaction with civil affairs.* The assistant chief of staff engineer planners broke new ground by developing a special engineer policy to accommodate the unusually important role taken by civil affairs in this operation. In a non-combat contingency environment, special consideration must be given to the political and cultural consequences of a construction program. In the final draft plan, exclusively civic action projects will require approval by civil affairs representatives. Strictly military projects, or dual military/civilian projects, on the other hand, require only coordination with civil affairs representatives.

The existing Infrastructure Management Group, organized by the United Nations High Commission on Refugees, will also play a role in civil affairs construction policy. This group now only monitors the status of the Bosnian infrastructure, but it is expected to provide the nucleus of a joint civilian/military engineer board. This type of coordination between civilian and military engineers can only be expected to increase in future operations.

• *A multinational plan for contracting.* Once it became apparent that coalition task force engineers would participate in the management of civilian construction contracts funded through NATO, a plan was conceived to administer these contracts through regional contract offices. A great deal of planning was required in anticipation of a huge backlog of construction contracting, both for troop support and for humanitarian assistance. An estimated 300 construction and material procurement contracts would be awarded in the first month alone, so a concept of centralized contracting authority, with decentralized staff at the regional contracting offices, was incorporated into the plan. This was expected to eliminate inflationary pricing of scarce materials while at the same time maximizing responsiveness.

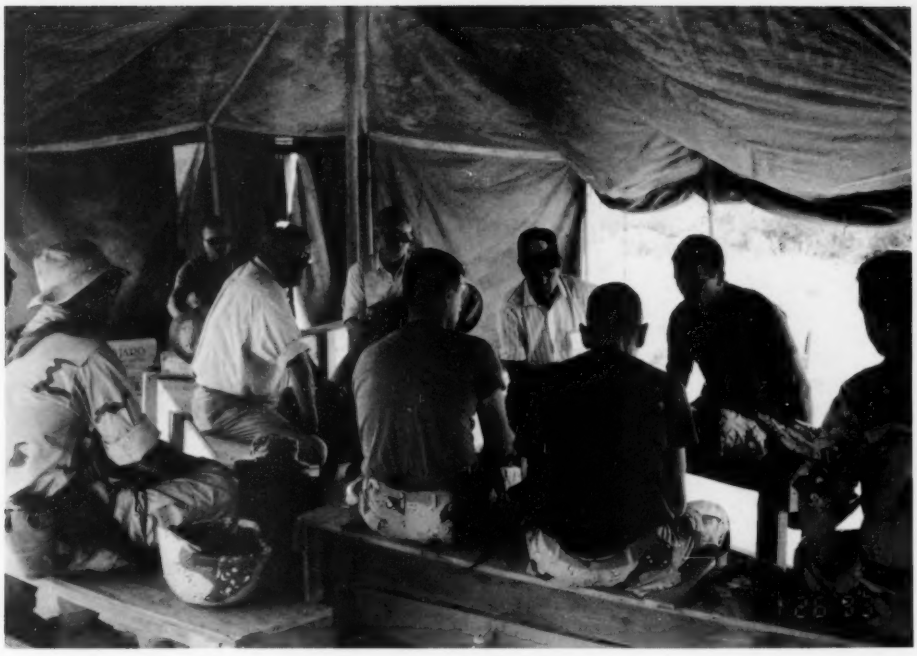
Special attention was given to integrating the contracting policies and economic interests of the nations taking part in the operation. Procedures taken for granted in U.S. operations may not apply to the coalition task force: U.S. Federal Acquisition Regulations do not control; standards for professional qualification for civilian staff, construction practices and material specifications will vary among member nations; and suppliers and contractors from all nations will no doubt wish to be included on bidder lists.

Ultimately, engineers will have to participate in the award and supervision of construction contracts, but the logisticians probably will directly control the contracting. Here again, coordination will be the key to success.

Conclusion

The contingency planning performed by RADM Nash and his staff proved highly successful, due to their willingness to adapt to a new operating environment. The result was a flexible, workable civil engineer support plan for NATO intervention in Bosnia. Not only did the effort produce a number of "firsts" for NATO, it also served to give us a glimpse of the future for military engineers. To operate within this multinational environment, Civil Engineer Corps officers must adapt to the uncertainties presented by integrated engineer forces, civil affairs issues and multinational contracting. ❑

*See ... *From the Sea*, September 1992, a white paper prepared jointly by the Secretary of the Navy, Chief of Naval Operations and Commandant of the Marine Corps, for the effect these changes will have on Navy and Marine Corps priorities.



Contract support coordination meeting at Bardera airfield. Pictured are representatives of Officer in Charge of Construction East Africa, Brown and Root Services Inc., the Marine battalion based at Bardera airfield and the Seabee detachment from NMCB One. The contractor was preparing to construct facilities to improve the austere living conditions at this site.

Operation Restore Hope: The Joint Experience

By CDR Will Boudra, CEC, USN

Jointness in the military is getting much attention these days. However, for most of us, unless we have attended a service college or served on a joint staff, the practical application of jointness may be a little fuzzy. It certainly was to me. Then I was sent on temporary additional duty to deploy with the Joint Task Force (JTF) engineer staff for Operation Restore Hope in Somalia, and jointness jumped squarely into focus. This article is a description of my experiences while serving on the JTF staff and some reflections on that experience a year and a half later.

Mobilization

The phrase "Here today, gone tomorrow" best describes my departure for Somalia. One day in early December 1992, my department head at the Naval Facilities Engineering Command Headquarters in Alexandria, Va., walked into my office with the head of the Seabee division. They asked if I would like to go to Somalia on the Joint Task Force engineer staff. Before I could answer,

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CDR Will Boudra is the head of the Military Construction Naval Reserve Budget Branch for the Director of Naval Reserve on the Chief of Naval Operations staff in Washington, D.C.

Berthing for the Nigerian (left) and Botswanese forces who participated in Operation Restore Hope. These tents were located in the former U.S. Embassy compound adjacent to the Joint Task Force/Unified Task Force headquarters.

At times I felt I was in "jointness" school as I observed the various U.S., United Nations, and supporting coalition troops work together to quell the rival factions and to deliver the urgently needed food to the millions of starving Somali people.

they warned me that a "yes" meant I would be on a plane to Camp Pendleton, Calif., the next morning. After consulting with my wife, I did say "yes," and at that point a whirlwind of activity began. The most ominous task was getting all the shots required. The hospital corpsman at the local medical clinic said taking all the required shots at once would be devastating to my body, so he settled on the first three. By the time I left California for Mogadishu, I had received 12 shots at four different sittings and was taking malaria pills daily. Without even seeing Somalia, I could already tell the conditions were going to be difficult.

I arrived in Camp Pendleton the next day by way of the 31st Naval Construction Regiment at Construction Battalion Center Port Hueneme, Calif., where I drew infantry gear, uniforms and a .45-caliber pistol. At Camp Pendleton, my joint experience began. The Joint Task Force headquarters was formed around the First Marine Expeditionary Force (I MEF). People from all services were flowing in to I MEF from all over the United States and the Pacific. I was instantly preparing for imminent deployment with officers and enlisted "engineers" from all the services. In our common desert camouflage uniforms, we looked and felt as if we were on the same team.

The most difficult part of mobilization was learning the joint organization. Having deployed twice with a Seabee battalion, I felt I knew the basic military structure. Not so! This organization had "J" codes and divisions that I had never heard of. J1 through J4 were basically the same as the S1 through S4 codes I knew from the Seabees. JTF Somalia, however, had a J5 and J6. There were divisions, such as Current Operations, Future Operations, Host Nation Support and Psychological Operations, that I had never dealt with. I had much catching up to do in a very short time. Fortunately, I had brought along my copy of *The Joint Staff Officer's Guide*. I also had two documents, outlining the how-to's of contingency engineering in a joint or combined operation. I was a serious student on the 25-hour flight to Mogadishu.

Soil cement stabilization project on the Baidoa airfield runway. The NMCB One detachment in Baidoa had the lead role. They were assisted with labor and equipment by U.S. Army engineers, also based at Baidoa, and by an Australian Army regiment. Pictured are Seabees from NMCB One using a Seabee water tanker and a U.S. Army soil cement tiller.

Operations in-country

The first task for the JTF engineering staff was to make the former U.S. Embassy compound usable for the headquarters staff and subordinate units. This was no easy task, as all that remained of the former western-style compound were the burned out shells of some concrete buildings and the steel framing of a few storage warehouses. Little public infrastructure remained in Somalia after two years of civil war.

The U.S. Embassy had been striped. Plumbing pipes were taken out of the walls, electrical service was removed from every conduit, and the marble and concrete tile squares were taken off the floors. To make matters worse, most of the buildings had been used as makeshift barns for goat herds. Our immediate challenge was to clean these structures, provide basic electrical and sanitary services, and stake out the tent camps for berthing as thousands of troops arrived daily.

The advantage of the joint engineer staff became immediately apparent. Quick service ties to arriving units of the respective services and ready knowledge of unit equipment and varying force capabilities enabled engineer units taskings to flow immediately. My assignment was to determine, scope and task projects to the mobilizing support contractor, Brown and Root Services Inc. (BRS) of Houston, Texas. The first BRS employees arrived in Mogadishu the day after the Marines came ashore. Contract administration was provided by the Atlantic Division, Naval Facilities Engineering Command through a new officer in charge of construction that stood up in Mombasa, Kenya, and later moved to the U.S. compound in Mogadishu with the JTF.

Combat and service engineer support to the rapidly advancing JTF offensive forces began immediately. Key

to this effort was aerial and ground reconnaissance of main supply routes and remote airstrips. The pace of the mostly unopposed advancing combat forces was furious. Accurate, timely engineering information was imperative. At times I felt I was in "jointness" school as I observed the various U.S., United Nations, and supporting coalition troops work together to quell the rival factions and to deliver the urgently needed food to the millions of starving Somali people.

I worked daily with personnel from all the U.S. services, and each day I found new JTF organizations previously unknown to me, such as the Joint Visitor Bureau, the Joint Information Bureau, the Joint Communications Support Center and the Joint Support Command. I also regularly worked with troops from Canada, France, Sweden, Australia, Pakistan, Norway and Nigeria. In my travels throughout the southern Somalia theater of operations, I flew on U.S. Air Force, Navy, Army and Marine Corps airplanes and helicopters as well as cargo and passenger planes from New Zealand. My longest flight was eight hours by helicopter with JTF psychological operations (PSYOPS) personnel, dropping hundreds of thousands of paper leaflets over villages in half the theater explaining the coming construction engineer operations to repair roads, bridges and airfields.

Contract tasking to BRS for engineering and construction support increased weekly. Supervisors were brought in from the United States and other western countries. Somalians made up the bulk of the workforce. Within the first 30 days of the operation, task orders grew to more than $10 million. Projects supported the JTF headquarters, subordinate U.S. component commanders and coalition forces.

Engineer taskings to Army, Navy, Air Force, Marine Corps and coalition engineer units swelled as well. In many locations these units were working side-by-side, sharing know-how, equipment and personnel to work efficiently. On one airfield repair project, for example, a detachment from Naval Mobile Construction Battalion One and troops from an Australian Army regiment worked together using equipment borrowed from a nearby U.S. Army construction engineer detachment. In another sector, equipment operators from NMCB 40 worked side-by-side with Canadian military engineers on road repair projects connecting Mogadishu to some of the most distant outlying relief areas.

Reflections

Looking back on my experience, I can make several observations. Jointness works well. Functioning successfully on a joint task force staff without prior joint education or experience, as I did, works also, but not quite as well. Quick learners will, however, find their way and will make very valuable contributions. In my case, in addition to learning a tremendous amount about the practical side of joint and combined operations, I made many great new friends from the other services. I recommend a JTF assignment to anyone who enjoys a challenge. Hopefully, it will come with more than 24 hours notice. ❑

Directional sign "for fun" constructed in Royal Australian Air Force base camp at Mogadishu Airport in Somalia. The Australian Air Force provided cargo aircraft to ferry people and cargo between locations in Somalia.

Editors note: In addition to CDR Boudra, two other CEC officers were assigned to the JTF staff in Operation Restore Hope. They were Lieutenant Cameron A. Manning, CEC, USN, of the Third Construction Brigade staff in Pearl Harbor, Hawaii, and Lieutenant Commander William S. Duffy, CEC, USN, from the Northern Division, Naval Facilities Engineering Command, in Lester, Pa. For additional information on the engineering effort in Operation Restore Hope, the reader is referred to CDR Boudra's article, Engineers Restore Hope in the July 1993 issue of The Military Engineer.

The CEC and Joint Duty

By CDR William L. Nelson, CEC, USN

Future U.S. military actions will be increasingly joint operations. Several converging issues are driving this change. The 1986 Goldwater-Nichols Defense Reorganization Act mandates multi-service coordination, budget realities are promoting closer military service cooperation, and the war principles stress command unity.

Joint duty engineers normally serve in combatant commander in chief (CINC) logistics directorates, where they identify facility and engineering force shortfalls during operations plan (OPLAN) development and contingency planning. They then work with component engineers to correct these shortfalls.

Here are some thoughts addressing Civil Engineer Corps and Naval Facilities Engineering Command preparedness and responsiveness in the joint era.

Stronger CINC roles

Activities generated new construction during the Cold War era. CINCs are now developing new post-Cold War OPLANs from which future engineering requirements will be derived. Virtually all Joint Strategic Planning System documents now direct joint approaches to future military operations.

As Desert Storm demonstrated, the keys to the joint approach are centralized planning and control with decentralized execution. Common doctrine and interoperability are also important. The National Military Strategy, the Joint Strategic Capabilities Plan, the Unified Command Plan and the Unified Action Armed Forces Publication all direct this approach. Consequently, the Joint Operations Planning System is now producing concept plans (CONPLANs) and OPLANs that integrate the capabilities of all services. OPLAN facility shortfalls will become the basis for the next decade's overseas military construction (MILCON) programs.

The CINCs justify future overseas construction. The services support specific CINC Integrated Priority List projects in the Planning, Programming and Budgeting System process. Additionally, the Chairman, Joint Chiefs of Staff Program Assessments address future CINC engineering requirements. To expect funding from Congress, services must justify new construction as unified CINC operational requirements.

Joint Duty's Nature

Some CEC officers view joint duty as purple-suited service work or assignments in which the CEC officer is a Navy, CEC or Seabee advocate. Staff civil engineer (SCE) functions, facility maintenance and budget monitoring are distinctly service responsibilities, *not* joint duty functions. Joint duty officers perform war preparation and execution functions such as planning operations, defining total requirements and analyzing force capabilities. CINC engineers identify operational facility shortfalls so that the services can modify the basing structure to meet the requirements.

The Joint Strategic Capabilities Plan requires CINCs to analyze the infrastructure during OPLAN development. Joint duty engineers participate in this fundamental CINC task.

Opportunities for CEC officers

CEC officers serve on the requirements identification and support sides of our national security organization. Largely assigned combat service support roles in the past, CEC officers should take the opportunity of performing new joint support roles including combat support and combat engineering. CEC officers should consider performing all forms of engineering , such as theater program management, construction contracting, base operations, troop construction and engineering operations.

Officer professional development

CEC officers need to understand other services' roles and functions in preparing for and executing joint military operations. Additionally, as uniformed engineers we can benefit professionally and operationally from an appreciation for Army, Air Force and Marine Corps engineering unit types and capabilities.

Joint duty requires engineers to be theater program managers, making decisions that have no service color but are couched in unbiased logic. Extensive facility management training and experience prepare CEC officers for the

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CDR William L. Nelson is a staff officer at The Joint Staff in Washington, D.C. He is a registered professional engineer in California.

combat service support technical challenges. Unit integration, maneuver and firepower responsibilities are considerably different from the construction and maintenance experience of CEC officers. Joint duty provides opportunities to prepare officers to exercise division, corps and theater-level operational engineer thinking.

Navy fleet engineers unfamiliar with their unified commander's or competing service components' issues may be at a disadvantage. These engineers must be able to discuss and negotiate in a joint environment to effectively gain CINC staff and resource support.

Therefore, the Naval School, Civil Engineer Corps Officers (CECOS) has incorporated joint organization awareness into its basic and refresher curricula. ❑

Have you considered the reserves?

If you are a young construction professional in civilian practice or civil service, or are a graduating engineering or architecture college senior who has already selected a career path, the reserve Civil Engineer Crops may have a place for you. For further information, please call or write a reserve representative listed below.

Scott Cleveland
RNCF Representative, Atlanta Area
Building NH47, Naval Base
Charleston, SC 29408-5192
Phone: (803) 743-2650
DSN: 563-2650

Jeanette Walker
RNCF Representative, Pacific Area
Naval Training Center, Building 304
San Diego, CA 92133-1000
Phone (619) 524-6846
DSN: 524:6846

Or contact an active duty accessions officer listed on page 32

NAVFAC: The Navy's Caretaker

An Overview of NAVFAC's Role in the Base Realignment and Closure Program

By Donald S. Allen
Mary T. Anderson
Sandra A. Berry

Twenty-seven significant Navy bases and more than 35 other sites have been targeted for closure under the Base Closure and Realignment (BRAC) program since 1988. The Naval Facilities Engineering Command (NAVFAC), as a key player in the BRAC program, serves as the Navy's construction agent for projects required to relocate units; environmental manager to clean up closed bases; caretaker for closed bases; and real estate disposal agent. This article gives a brief overview of the BRAC program, discusses the closure process and focuses on NAVFAC's caretaker claimant responsibilities.

History

Closing military installations is not unique to the 1990s. Installations were closed after World War II, the Korean conflict, and in the 1960s and 1970s. At those times, it was generally agreed base closures were required, but the selection process was often characterized as arbitrary or politically motivated.

In the late 1980s, Congress addressed the need to restructure the Department of Defense due to changes in international politics, growing budget deficits and shifting military requirements. Restructuring plans must be crafted and implemented in a nonpartisan fashion. This resulted in the Base Closure and Realignment Act of 1988 (P.L. 100-526). The first set of closures, known as BRAC I, resulted in major closures at Naval Station Puget Sound, Wash., Naval Hospital Philadelphia, Pa., and Naval Station Brooklyn, N.Y. Compared with the other services, these closures had little impact on the Navy.

In 1990, Congress passed the Base Closure and Realignment Act of 1990 (P.L. 101-510). This act, similar to the earlier law, provides for an independent commission to review recommendations provided by the services for base closures and report to

Don Allen is head of the Caretaker Claimancy Division in the Base Closure Office at the Naval Facilities Engineering Command Headquarters in Alexandria, Va. Mary Anderson and Sandra Berry are on the staff of the Caretaker Claimancy Division.

the president. The president submits the list to Congress, where both houses must reject it or it becomes law. This law resulted in BRAC II (1991) and BRAC III (1993) closures, and will govern BRAC IV closures in 1995.

The players

• *Office of the Secretary of Defense.* In June 1993, the secretary of defense appointed a special assistant for base closure transition, who is responsible for fostering economic development and reinvestment after base closure. Additionally, the services were required to name base transition coordinators at each closing base. The transition coordinator is the community's ombudsman, providing direct access to the Department of Defense for issues requiring resolution.

• *Program sponsor.* Each service is responsible for closure, cleanup and disposal of its bases. The property disposal authority generally exercised by the General Services Administration has been delegated to the assistant secretary of the Navy and is executed through NAVFAC. The Navy's BRAC program sponsor is the chief of naval operations, director of shore activities (N44). N44 provides Navy implementing policy for BRAC, manages distribution of Navy BRAC funds to claimants and coordinates Navy BRAC actions.

• *Major claimants.* Claimants provide BRAC funds and guidance to commanding officers (COs) of closing bases and are responsible for relocating units that are not disestablished. Construction requirements supporting relocating units are coordinated with NAVFAC. Coordination is also required for transfer of closed bases to the NAVFAC caretaker claimancy. Transfer of property to NAVFAC is governed by a memorandum of understanding negotiated between NAVFAC and the major claimant responsible for the closing base.

The Naval Facilities Engineering Command, as a key player in the BRAC program, serves as the Navy's construction agent for projects required to relocate units; environmental manager to clean up closed bases; caretaker for closed bases; and real estate disposal agent.

• *Closing bases.* After closure is announced, the CO at the closing base acquires a new mission—that of closing the base. The base CO develops a closure plan that addresses layaway requirements for each facility. The plan considers the community reuse plan, current facility condition and the expected duration of facility inactivation. Layaway of facilities is done by the public works staff, other Navy commands (such as a public works center) or by contract. Personal property identified in the community reuse plan is left at the closed base.

• *Community.* One of the community's first actions is to establish a reuse planning group tasked with developing a community reuse plan. The Office of Economic Adjustment provides planning grants for this purpose. Once the reuse plan is complete, it becomes the basis of the preferred alternative in the National Environmental Policy Act (NEPA) documentation covering the proposed disposal.

• *NAVFAC.* NAVFAC is responsible for its traditional mission, in-

Art by Bill Brack

'scuse me cap'n... I heard you might have a vacancy.

cluding construction for realignment, technical and engineering support for facility maintenance, and environmental cleanup. Tasking in 1989 assigned NAVFAC the responsibility for disposing of real property at BRAC sites under the policy guidance of ASN (I&E). In 1993, the chief of naval operations assigned NAVFAC with caretaker claimancy responsibilities.

This new mission and the extent of the BRAC program resulted in formal establishment of the NAVFAC Base Closure Office (BCO). The BCO is the command's BRAC program manager responsible for coordinating execution by the engineering field divisions (EFDs) and engineering field activities (EFAs), through the functional program managers; securing and managing resources for all BRAC requirements; and serving as the caretaker claimant for closed bases.

Closure process

NAVFAC's responsibilities start before operational closure, by assisting claimants in development of construction projects to accommodate relocating units. Environmental baseline surveys and base cleanup plans are developed. Base environmental coordinators are assigned for each base to facilitate fast track cleanup.

The Navy's goal is to move rapidly from operational closure to disposal of excess real property. First, property is screened for other Department of Defense (DOD) or federal interest. Screening results are provided to the community to be incorporated into the community redevelopment plan. Then the property is screened for interest by the Department of Health and Human Services which, under the McKinney Act, provides excess government property to homeless people. Community redevelopment plans receive next consideration. Property conveyed to the redevelopment authority is used to revitalize local communities through job creation actions (such as developing new industrial capabilities) and to satisfy state and local agency needs. Depending on several factors, property may be conveyed as a conveyance, or transferred at less than fair market value, or for negotiated sale at fair market value. If there is still no interest, the property may be sold to the private sector at rates dictated by the market.

Most Navy bases require some environmental cleanup that causes the Navy to retain property after the base is closed. To minimize the impact of delayed disposal on the community, parcels of the closed base will be leased to redevelopment agencies to the extent possible consistent with community reuse plans. This involves the local community early in the disposal process and limits Navy's caretaker costs. Clean parcels can be deeded over without delay.

Caretaker

Closed bases not transferred to other DOD or federal agencies, or that cannot be conveyed to the local community at the time of operational closure, are transferred to NAVFAC. NAVFAC's caretaker mission is to balance the level of maintenance at the closed base, consistent with the community's reuse plan, while minimizing the cost to the Navy.

Caretaker site offices (CSOs) are established to manage closed bases. CSOs are EFD/EFA detachments located at the base. A CSO may be established a year before closure and may be responsible for single or multiple sites,

BRAC Closure Sites

Major BRAC I Navy Closure Sites

- NAVSTA Puget Sound, Wash
- NAVHOSP Philadelphia, Pa.
- NAVSTA Brooklyn, N.Y.

Major BRAC II Navy Closure Sites

- NAS Chase Field, Texas
- NAVHOSP Long Beach, Calif.
- CBC Davisville, R.I.
- NAVSTA Philadelphia, Pa.
- NAVSHIPYD Philadelphia, Pa.

Major BRAC III Navy Closure Sites

- NAVSTA Staten Island, N.Y.
- NTC San Diego, Calif.
- NAVSTA Charleston, S.C.
- NTC Orlando, Fla.
- NAVSTA Mobile, Ala.
- NAVSHIPYD Charleston, S.C.
- NAS Cecil Field, Fla.
- NAVSHIPYD Mare Island, Calif.
- NAVSTA Treasure Island, Calif.
- NAVHOSP Orlando, Fla.
- NAS Barbers Point, Hawaii
- NAVHOSP Oakland, Calif.
- NAS Alameda, Calif.
- PWC San Francisco Bay, Calif.
- NAF Midway Island
- NAS Dallas, Texas
- NAS Agana, Guam
- NAS Glenview, Ill.

depending on the proximity of closed bases. Normally a Civil Engineer Corps officer is designated to head the CSO to satisfy engineering, contractual and community interface needs. This officer is supported by a staff of five to 15 civilian employees, usually from the closed base(s).

Before closure, the CSO catalogs documentation on real and related personal property from the closing base, monitors layaway efforts and assists, as requested, in managing closure actions.

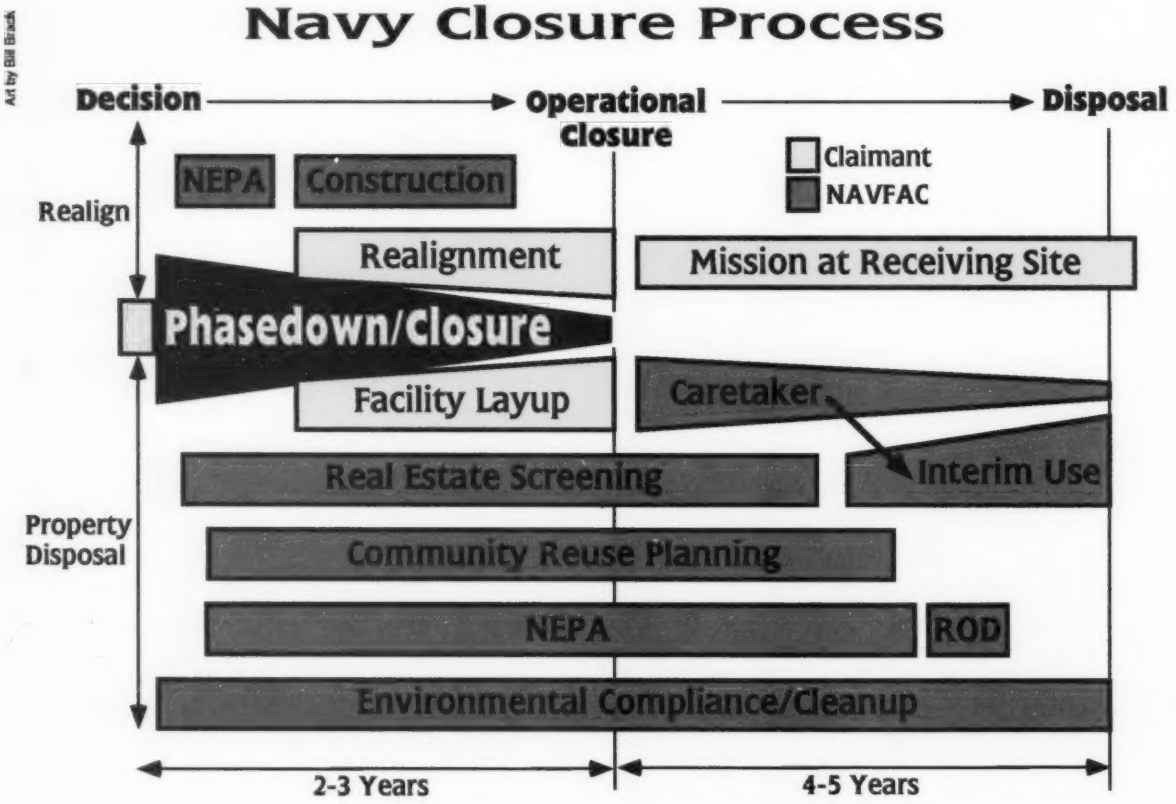
After closure, the CSO manages base maintenance and support services, provides oversight for environmental cleanup and compliance monitoring contracts, and is the focal point for community relations and working with the state redevelopment authority. Final disposition of the closed base results in deactivation of the CSO.

Funding requirements for CSO staffing and caretaker services have been budgeted through FY 99. Salary dollars for CSO staffing was based on staffing expectations at each closure site. Caretaker services were supported at a rate of 0.5 percent of the closed base's current plant value. Funds for environmental cleanup were budgeted separately. Caretaker services will be provided by facilities service contracts, base operating support contracts, or by service agreements with other Navy activities having public works capability.

Future

Caretaker claimancy policy and guidance is evolving. The BCO is working closely with EFDs/EFAs to better define program requirements and, concurrently, is working with CNO (N44) to comply with Navy, DOD and congressional direction. The BCO is reviewing Air Force and Army caretaker policies and procedures to benchmark the Navy's program. With the shrinking resources available to accomplish all Navy missions, funding for caretaker requirements is a challenge. The BCO is working with the comptroller of the Navy to make sure funds are sufficient to meet closure objectives. ❑

Editor's Note: NAVFAC engineering field divisions and engineering field activities can be contacted for more information on environmental cleanup, NEPA studies and real property disposal.



Among the many services PWC Washington has provided is hanging a wreath at the Naval Surface Warfare Center, Dahlgren Division, Detachment, in White Oak, Md. (Photo by Al Lawrence)

Recipe for a Public Works Center

By CAPT John S. Ahl, CEC, USN

Take 900 people from six medium-sized public works departments, blend them together with one Civil Engineer Corps captain, a business manager, a production manager, several department heads and a computer. Sprinkle with DBOF (Defense Base Operating Fund) seasoning and serve immediately to guarantee maximum savings...

Seem simple? Guess again!

The list of ingredients for a public works center recipe was prepared by a July 31, 1991, plan from the Secretary of the Navy to establish new public works centers at Washington, D.C., Charleston, S.C., and Jacksonville, Fla. (Plans for the Charleston PWC were later dropped.) The centers would comply with Defense Management Report Decision 967 recommending consolidation of base engineering services. This is the story of how one of those centers—Public Works Center Washington—came to be.

The directive for Washington said to consolidate public works departments from the Washington Navy Yard; the U.S. Naval Observatory; the Naval Security Station; the Naval Research Laboratory and the National Naval Medical Center, Bethesda, Md., into a new center.

Later, the public works department at Naval Surface Warfare Center, Dahlgren Division, Detachment, White Oak, Md., was added. All the shop forces were to remain at the activities they supported. However, public works overhead staff would be consolidated to save money.

The new activity—PWC Washington—would report to the Comman-

Two public works centers were established in the fall of 1992—in Washington, D.C., and in Jacksonville, Fla. These two articles—*Recipe for a Public Works Center* and *PWC Jacksonville: The Genesis of a Journey*—take a look at how those PWCs went from a concept to fully functioning organizations providing quality services to their customers.

CAPT John S. Ahl is the commanding officer of Public Works Center Washington, D.C.

dant, Naval District Washington. It was to start operating on Oct. 1, 1992.

Rolling up our sleeves

Although simple in concept, forming independent units into one center was a complex, difficult task that took careful planning, coordination and just plain hard work. Information on planning a center was scarce. The last time the Navy established a PWC was in 1974, and very little corporate memory existed.

By November 1991, I was named prospective commanding officer, and Clarence "Skip" Wenzel had the duty of prospective business manager. Time seemed to be on fast forward.

A generic plan of action and milestones showed we needed 24 months before operation. With only 11 months available, we had to tailor the plan as well as the budget. The generic plan required $6 million to establish PWC Washington, and we had less than $2 million.

So, again, we sharpened our pencils and worked a new plan based on the realities of time and money. We came up with these precepts:

- Maximum participation of affected activities
- No disruption of essential services
- Utmost consideration of affected employees
- Optimum communications with affected commands

The pre-establishment team

In December 1991, the Commandant, Naval District Washington, officially established us as Public Works Center Washington Detachment. We were a temporary detachment of Headquarters, NDW, charged to take all necessary actions to form PWC Washington by the first of October 1992.

With our sights set, we formed a pre-establishment detachment, which consisted of an officer in charge (who was the prospective commanding officer of the PWC) and a cadre of 20 persons. They were the "seed corn" of the organization. Most were managers, destined to become department heads at the new center, and administrative support personnel.

The team had a lot of help. Persons from other PWCs and the Naval Facilities Engineering Command's Public Works Field Support Division (FAC 131) gave hands-on support as needed. The enthusiasm and skill helped us immeasurably.

By working with public works personnel at the affected activities, the team developed comprehensive plans. The strategy reflected each activity's requirements, as well as standard PWC operations. As officer in charge, I made periodic briefings and visits to these commands so there were no surprises.

Over the next several months, the PWC Washington organization was finalized. In it, we eliminated several traditional overhead elements, and reflected the zone concept under which the center was chartered. (In the zone concept, a zone manager and staff work with on-site staff civil engineers to handle everyday requests. PWC Washington has four zones servicing six activities.)

At the same time, we learned that the center's headquarters would be at the Washington Navy Yard, and shop spaces were identified. We also determined what positions would be transferred to the PWC and which retained in the staff civil engineer offices. The Navy comptroller approved our budget for fiscal year 1993 and the rates we would charge.

The team developed plans for indoctrination and training, and we briefed our new customers about the

Art by Bill Brack

*Hey, you're gonna **love** it!!!*

center. Other details, such as contracts to be transferred from activities to the center were noted, along with property (utility systems, tools, equipment and buildings).

A place to put our keyboards

Lady Luck often lent a hand to the dedicated efforts of the pre-establishment team. The fate of the Navy's complex at Subic Bay, including Public Works Center Subic Bay, was sealed with the rejection of the proposed U.S. Bases Treaty by the Philippine Senate and the devastating eruption of Mount Pinatubo. Subic's misfortune, however, permitted redirecting its newly acquired computer (a long lead item) to PWC Washington. Without this windfall, the startup date would have been at serious risk.

Suitable headquarters space became available when DOD's Information Resources Management College moved from Washington Navy Yard to Fort Leslie J. McNair in Washington, D.C.

The team was busy finalizing operational aspects of the new PWC. Additionally, efforts were underway to ensure our establishment as a new Echelon III naval activity. A mission statement, facts and justification document, and staffing recommendations were prepared for the office of the Chief of Naval Operations. Administrative particulars like getting a Unit Identification Code, officer billets and ensuring our inclusion in the Standard Navy Distribution List were attended to. Payroll lists were made. Appropriate notification was made to affected unions. A thousand and one details!

Another beginning

At last it was final, and we beat the deadline by two months! On Aug. 1, 1992, PWC Washington was officially

Continued on page 32

Public Works Center Jacksonville.

PWC Jacksonville: The Genesis of a Journey

By CDR Andrew D. Brunhart, CEC, USN

Public Works Center Jacksonville, (PWC Jax) was established on Oct. 2, 1992, following the recommendation of Defense Management Report Decision 967 to consolidate base engineering support of more than 90 activities in the Jacksonville, Fla., area. In eight months, the public works departments at Naval Air Station Jacksonville, Naval Air Station Cecil Field and Naval Station Mayport were merged into the center. Staff civil engineer departments were organized at these installations to provide budgeting, environmental support and work orders to the center.

Financially, PWC Jax is a medium-size center with an estimated FY 94 revenue of $100 million. It is staffed by 195 civilian personnel and seven military officers. More than 95 percent of the workload is executed by contract. Only transportation maintenance and pest control at NAS Jacksonville, and hazardous waste receipt and processing are performed by civilian personnel. On any given day more than 600 contractor employees provide support.

To accommodate the geographic dispersion of the three bases, a zone office was established at each base. There is a 25-person core team in each zone whose responsibilities are base engineering support and day-to-day public works service delivery. Zone personnel coordinate and track work such as emergency service, minor work and specific jobs. Contract quality assurance is an important activity at each zone.

PWC Jax provides an annual contract service volume of more than $40 million. Therefore, it is paramount

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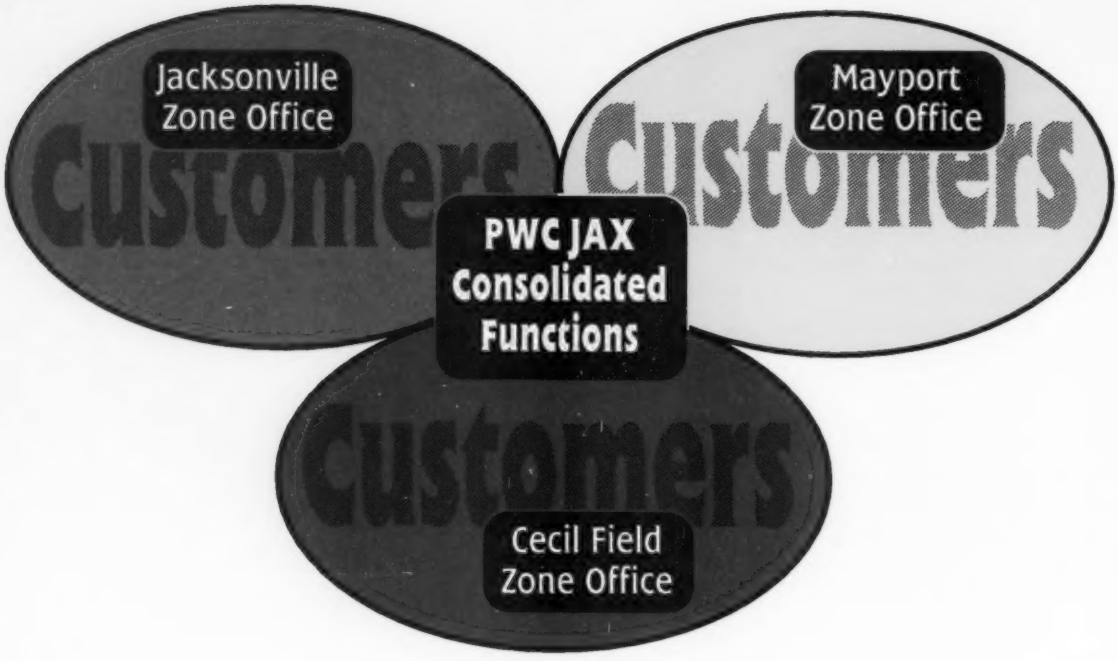
By CDR Andrew D. Brunhart is the executive officer of Public Works Center Jacksonville, Fla.

Art by Bill Brack



that the most efficient and cost effective contract vehicles are used. At startup, more than 125 service contracts were in place within the region. Contracting efforts at each major installation had previously been autonomous. As a result, there was little communality to the organization and a mixture of contract support at the three major stations. Recognizing the potential for cost savings and improved administration, the center has realigned common requirements by function on a regional basis. The center has had great success with reductions in cost for janitorial, grounds and refuse collection and disposal. Award prices have been very attractive *and* the quality of service has improved.

Three "strike" teams are producing benchmarked contract vehicles to regionalize transportation, facility maintenance and utility operations, and family housing maintenance. The center is using innovative contracting methods, combining source selection procedures with multi-year contracting. Contracts include fixed price and indefinite quantity portions with an award fee.

The PWC financial system allows centers to provide customers with information far beyond that normally available at public works departments. With the assistance of folks from other centers and the Naval Facilities Engineering Command's Public Works Support Division personnel, a cost accounting/billing system tailored to each customer has been implemented. Customer response has been very enthusiastic.

PWC Jax operates a transportation fleet of more than 1,400 vehicles. At startup, well over half of the fleet inherited from the public works departments was overage. To date, the fleet has been reduced by nearly 10 percent, and the average age of vehicles has decreased by 27 percent.

A PWC board of directors has been established. Essentially, the commanding officer of PWC Jax acts as the president and chief executive officer of the corporation. The chairman of the board is the area flag officer. The board members are the customer commanding officers whose activities do an annual business with PWC Jax in excess of $1 million. The board meets quarterly and is briefed on the financial status of *their* corporation and the status of vital issues. The board has helped in crystallizing customer consensus and making sure PWC Jax progresses on a path that meets their expectations.

PWC Jax customers expect a prompt response to large and small projects. Response is a challenge for PWC Jax since there are no in-house personnel to react immediately to urgent customer needs. The board of directors has approved response targets and authorized minor manning increases. The active involvement by local skippers in understanding the process and setting quantified re-

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CECOS Graduates Basic Class Number 200

By CWO2 Joseph A. Slovensky, CEC, USN

A milestone in the proud history of the Naval School, Civil Engineer Corps Officers (CECOS) was reached on Oct. 1, 1993, when CECOS graduated 53 members of basic class number 200. Forty-two years have passed since the first basic class graduated on Dec. 14, 1951, and 26 years have elapsed since basic class number 100 graduated on Sept. 6, 1968. The original basic course was known as Basic CEC Course II. However, it had the same purpose then as it does now—to teach student officers how to apply their civilian engineering education to the Navy' civil engineering needs and to prepare the officers for their new duty stations through an overview of public works, contract administration and naval mobile construction battalion activities.

In May 1943, a public works course was established in Norfolk, Va., to train Civil Engineer Corps officers who were to be assigned public works duty in the naval shore establishment. The officer training program was moved from Camp Peary, at Williamsburg, Va., to Camp Endicott at Davisville, R.I., in May 1944. In May 1945, the public works indoctrination course at Norfolk was moved to Camp Endicott and consolidated with the Officer Training School to form the Civil Engineer Corps Officers School, more familiarly known as CECOS. The school continued to function at Endicott until it was moved to the Naval Construction Battalion Center at Port Hueneme, Calif., where, on Sept. 1, 1946, it was established as United States Naval School, Civil Engineer Corps Officers. In February 1972, the management control of the school was transferred from Bureau of Naval Personnel to the Chief of Naval Technical Training.

Beginning with basic class number one, more than 7,886 basic student CEC officers have passed through the doors of CECOS. Currently, three basic classes convene per year, training a total of 110 CEC officers yearly. These officers include graduates of the Officer Candidate School, Naval Reserve Officer Training Corps (NROTC) units, the Naval Academy, transferees from the line, limited duty officers and chief warrant officers.

CECOS serves a diverse population including Civil Engineer Corps officers, other naval officers, officers from other armed forces, foreign officers, Seabee chief petty officers and civilian employees of the Department of Defense. The curriculum offers seminars, integrated training, group paced team training, projects to enhance skills, "road shows" (where the instructor goes to the students) and fleet training.

More than 3,200 students are taught annually by CECOS in more than 30 courses. These courses train personnel in naval facilities engineering, engineering management, public works, environment and allied disciplines.

In support of CECOS' increased student load and the Naval Facilities Contracts Training Center (NFCTC), the Admiral Ben Moreell Hall was opened January 1991 to house both schools. The two-level complex provides state-of-the-art lecture rooms, research and film libraries, office spaces, study areas and lounges. ❑

Art by Bill Brack

CWO2 Joseph A. Slovensky was a member of the Naval School, Civil Engineer Corps Officers' basic class number 200.

Basic Class 200

Graduation: Oct. 1, 1993

First row, from the left: ENS Natasha L. Smith*, LT Frederick F. Burgess*①, ENS Russell V. Seignious, ENS Amy L. Munninghoff and ENS Shawn T. Tooker.

Second row: ENS Tiffany M. Zallnick, ENS Eric P. Rankin[B], ENS Glenn G. Albrecht, ENS Christopher J. Rehor, ENS Daniel A. Gallimore, ENS Jeffrey P. Sulla*, LT Brian K. Moore*‡, ENS Gilbert B. Manalo, ENS Douglas W. Lamay*, ENS Trent L. Carmichael, ENS Steven J. Bowser, ENS Gregory G. Vinci Jr., ENS Kenneth B. Turner and ENS Michelle L. Hitchcock.

Third row: ENS Kevin J. Stroud, ENS Jay A. Murphy, ENS Kristin M. Burbage, ENS Jeffrey E. Kristick, ENS Michael D. Kenney, ENS David E. Gustafson, ENS Jeffrey R. Bornemann, ENS Rolfe E. Ashworth*, ENS Nelson R. Wells, ENS Ronald J. Holzman*, ENS Randall A. Gumke, ENS Brian D. Ciaravino*, ENS Daniel P. Turner*, LT Michael T. O'Toole, ENS Elizabeth K. Toussaint.

Fourth row: ENS Kerryn L. O'Neill, LT David M. Smith, ENS Cody W. Stice*, ENS Michael Lewis, ENS Raymond A. Pyle, ENS John N. Otto, LT Timothy M. Cole, CWO2 Joseph A. Slovensky, ENS Kurt R. Bratzler, ENS Richard L. Pringle, ENS Scott D. Loeschke, ENS George C. Howell III, ENS Gregg V. Thompson and ENS William L. Whitmire III.

Back row: ENS Tarey D. Isbell, ENS Danny A. Whitfield, ENS Richard D. Hayes III, ENS Omar M. Garcia, ENS Joseph C. Kline and CWO2 Carl T. Hubbell*.

* With Distinction ‡ Class Commander ① First in Class [B] Bull Ensign

Name	Degree/College	Duty Station
ENS Glenn G. Albrecht	BS Bldg. Sci./B. Arch./RPI	NAVCOMTELSTA Keflavik, Iceland
ENS Rolfe E. Ashworth	BS Arch. Eng./Penn State Univ.	SOUTHDIV Cont. Off., Beaufort, S.C.
ENS Jeffrey R. Bornemann	BSIE/Milwaukee Sch. of Eng.	WESTDIV Cont. Off., Concord, Calif.
ENS Steven J. Bowser	BSCE/Carnegie Mellon Univ.	NMCB 40, Port Hueneme, Calif.
ENS Kurt R. Bratzler	AA/Gulf Coast Comm. Coll.	NAS Kingsville, Texas
ENS Kristin M. Burbage	BSOE/USNA	OICC SOWESTPAC, Cont. Off., Diego Garcia
LT Frederick F. Burgess	BSME/Univ. of Notre Dame	LANTDIV Cont. Off., Norfolk, Va.
ENS Trent L. Carmichael	BSCE/Northwestern Univ.	OICC NAVFACENGCOM Cont. Agana, Guam
ENS Brian D. Ciaravino	BSEE/Univ. of Florida	NMCB Four, Port Hueneme, Calif.
LT Timothy M. Cole	BSCE/Univ. of Illinois	SOUTHWESTDIV, San Diego, Calif.
ENS Daniel A. Gallimore	BSME/Northwestern Univ.	OICC NAVFACENGCOM Cont. Agana, Guam
ENS Omar M. Garcia	BSCE/Univ. of S. Florida	LANTDIV Cont. Off., Roosevelt Rds, Puerto Rico
ENS Randall A. Gumke	BSEE/Univ. of Florida	LANTDIV Cont. Off., Jacksonville, N.C.
ENS David E. Gustafson	BSME/MIT	SOUTHDIV Cont. Off., Dallas, Texas
ENS Richard D. Hayes III	BSME/Carnegie Mellon Univ.	PWC, San Francisco Bay, Oakland, Calif.
ENS Michelle L. Hitchcock	BSCE/Colorado State Univ.	NAVSTA Guam
ENS Ronald J. Holzman	AS/Penn State University	NETC, Newport, R.I.
ENS George C. Howell III	BSCE/Rice University	NAS Adak, Alaska
CWO2 Carl T. Hubbell	BS Bus. Man./Univ. of La Verne	CHESDIV Cont. Off., Quantico, Va.
ENS Tarey D. Isbell	BSEE/The Citadel	NAVSTA Roosevelt Roads., Puerto Rico
ENS Michael D. Kenney	BS Aero. Eng./USC	SOUTHWESTDIV Cont. Off., Long Beach, Calif.
ENS Joseph C. Kline	BSME/University of Idaho	PWC San Francisco Bay, Oakland, Calif.
ENS Jeffrey E. Kristick	BSME/USNA	OICC NAVFACENGCOM Cont. Agana, Guam
ENS Douglas W. Lamay	BS Nuc. Eng./RPI	NORTHDIV Cont. Off., Brunswick, Maine
ENS Michael Lewis	BSEE/Geo. Washington Univ.	NAVWPNSTA, Earle, N.J.
ENS Scott D. Loeschke	BSME/S.D. Sch. of Mines/Tech.	WESTDIV Cont. Off., NAS Lemoore, Calif.
ENS Gilbert B. Manalo	BSME/Univ. of Rochester	NMCB 74, Gulfport, Miss.
LT Brian K. Moore	BSME/USNA	NAS, Oceana, Virginia Beach, Va.
ENS Amy L. Munninghoff	BE/Vanderbilt University	LANTDIV Cont. Off., Roosevelt Rds, Puerto Rico
ENS Jay A. Murphy	BS Sys. Eng./USNA	NMCB Seven, Gulfport, Miss.
ENS Kerryn L. O'Neill*	BSOE/USNA	SOUTHWESTDIV, San Diego, Calif.
LT Michael T. O'Toole**	MSME/Univ. of Notre Dame	NMCB 25, NAS Glenview, Ill.
ENS John N. Otto	BSCE/Geo. Washington Univ.	NAF, Atsugi, Japan
ENS Richard L. Pringle	BSCE/Colorado State Univ.	LANTDIV Cont. Off., Cherry Point, N.C.
ENS Raymond A. Pyle	BSEE/Univ. of Oklahoma	PWC, San Francisco Bay, Oakland, Calif.
ENS Eric P. Rankin	BSEE/RPI	OICC NAVFACENGCOM Cont. Agana, Guam
ENS Christopher J. Rehor	BSCE/Illinois Inst. of Tech.	PWC Guam
ENS Russell V. Seignious	BSCE/Univ. of S. Florida	NMCB 133, Gulfport, Miss.
CWO2 Joseph A. Slovensky	ASSE/Northeastern Univ.	NAVSHIPYD, Portsmouth, Va.
LT David M. Smith	BSEE/VMI	NAS Keflavik, Iceland
ENS Natasha L. Smith	BSOE/USNA	PHIBCB One, San Diego, Calif.
ENS Cody W. Stice	BSME/Univ. of Michigan	PWC Great Lakes, Ill
ENS Kevin J. Stroud	BS Naval Arch./USNA	PWC Great Lakes, Ill.
ENS Jeffrey P. Sulla	BEEE/Vanderbilt University	EFA Midwest Cont. Off., Crane, Ind.
ENS Gregg V. Thompson	BSCE/Oregon State Univ.	NAVSTA Panama Canal, Rodman, Panama
ENS Shawn T. Tooker	BSME/Univ. of Rochester	NMCB Seven., Gulfport, Miss.
ENS Elizabeth K. Toussaint	BSEE/BME/Duke University	LANTDIV Cont. Off., Pan. Can., Rodman, Puerto Rico
ENS Daniel P. Turner	BSCE/Cornell University	NMCB One, Gulfport, Miss.
ENS Kenneth B. Turner	BSEE/The Citadel	SOUTHDIV Cont. Off., Key West
ENS Gregory G. Vinci Jr.	BSEE/VMI	NMCB Seven, Gulfport, Miss.
ENS Nelson R. Wells	BSME/Texas Tech. Univ.	NAS Keflavik, Iceland
ENS Danny A. Whitfield	BSEE/Oklahoma State Univ.	SOUTHDIV Cont. Off., Corpus Christi, Texas
ENS William L. Whitmire III	BSME/Univ. of S. Carolina	NMCB Five, Port Hueneme, Calif.
ENS Tiffany M. Zallnick	BSOE/USNA	NAVHOSP Twentynine Palms, Calif.

*ENS O'Neill died on Dec. 1, 1993.
**Reserve officer who joined class July 19, 1993 to Aug. 1, 1993

Basic Class 201

Graduation: Dec. 17, 1993

ENS Maria L. Aguayo
BSIE/Stanford University
to EFA MED Cont. Off.,
Rota, Spain

LCDR Mohammed A. Al-Ghamdi
BSCE/Univ. P&M
to Royal Saudi Naval Forces

Marei Z. Al-Shehri
BSAE/Florida A&M
Royal Saudi Naval Forces

ENS Mary M. Chen
BSEE/Oklahoma State Univ.
OICC Far East Cont. Off.,
Okinawa, Japan

ENS James M. Collins*Θ
BSCE/VMI
NMCB 133,
Gulfport, Miss.

ENS Jeffrey J. Dolven
BS Sys. Eng./USNA
SOUTHDIV Cont. Off.,
Meridian, Miss.

ENS John B. Geurin
BCE/Auburn Univ.
PWC Pensacola, Fla.

ENS Russell V. Hime
BSEE/The Citadel
SOUTHWESTDIV Cont. Off.,
Camp Pendleton, Calif.

LT William E. Howe III*
BSOE/USNA
PWC Jacksonville, Fla.

LT Lewis S. Hurst
BSCE/VMI
SOUTHDIV Cont. Off.,
Jacksonville, Fla.

LTJG William O. Isaacs
BS Aero. Space/
Okla. St. Univ.
LANTDIV Cont. Off.,
Keflavik, Iceland

ENS Donna R. Kimball
BSCE/Univ. of Illinois
WESTDIV Cont. Off.,
Vallejo, Calif.

ENS Damon P. Lilly*
BS Matl/Auburn Univ.
NORTHDIV Cont. Off.,
Newport, R.I.

LT Timothy R. Markle
BSCE/VPI
WESTDIV Cont. Off.,
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ENS Russell J. Mattson
BSME/Univ. of Idaho
NAS Keflavik, Iceland

LT Joseph J. McConnell
BSCE/RPI
OICC NAVFACENGCOM
Contracts Agana, Guam

LT Marko Medved
BSOE/USNA
LANTDIV Cont. Off.,
Roose. Rds., Puerto Rico

ENS Daniel A. Petno
BSCE/Ohio State Univ.
NORTHDIV Cont. Off.,
Staten Island, N.Y.

ENS Christopher G. Porter
BSCE/Auburn Univ.
NAVSTA Panama Canal,
Rodman, Panama

ENS Laurence J. Richards
BSCE/Auburn Univ.
NMCB One,
Gulfport, Miss.

ENS La Tanya E. Simms
B. Arch./Florida A&M Univ.
LANTDIV Cont. Off.,
Norfolk, Va.

ENS Daniel M. Stoddard
BSME/Oklahoma State Univ.
NMCB Three,
Port Hueneme, Calif.

ENS Frank J. Varano
BCE/Villanova Univ.
OICC MED Cont. Off.,
Sigonella, Italy

LT Michael A. Weaver*‡
BSEE/Univ. of Miss.
OICC NAVFACENGCOM
Contracts Agana, Guam

ENS Scott Wivell
BSCE/Univ. of Pittsburgh
NORTHDIV Cont. Off.,
Lakehurst, N.J.

* With Distinction
‡ Class Commander
Θ First in Class
Ƀ Bull Ensign

Let's Try Using the Just in Time Inventory System for Hazardous Waste Minimization

By CDR Dennis J. Sobota, CEC, USNR

During work on a hazardous materials reutilization project, it occurred to me that hazardous material minimization is really a subset of the just in time inventory (JIT) system.

The typical inventory system, whether it includes hardware, assembly panels or hazardous materials, "pushes" everything that an activity or ship might need and stores it until used. In addition to being very expensive and requiring large amounts of space, an extensive hazardous materials inventory has the additional burden of shelf life requirements. Disposal of unopened hazardous materials which have exceeded their shelf life may cost the U.S. government millions of dollars annually.

The JIT is a "pull system." The final user "pulls" the materials as required, orders just what he needs and reduces the need for on-site storage and the problem of shelf life expiration. Because large volumes are not available, the correct materials *have* to be delivered in a timely fashion to the work site.

JIT is just one leg of the continuous improvement/total quality triangle of the Total Quality Leadership philosophy. The other components are employee involvement and statistical operator (or process) control. JIT inventory management used in manufacturing may be applied to the hazardous materials program in these ways:

• **Fix internal systems first** by reviewing the systems requiring the hazardous materials. The elimination of hazardous materials entirely may be possible. Review and reduce the authorized use list after users' systems are refined.

• **Investigate flow processing.** Group operations into families that require similar machines and therefore solvents or lubricant oils.

• **Stabilize the production schedule.** With constant work levels, operators can accurately predict their hazardous materials requirements and reduce the volume of orders.

If we think more of inventory or materials rather than hazardous materials on the authorized use list ..., the task of hazardous materials minimization seems a little less formidable.

• **Introduce JIT incrementally,** one ship or activity at a time, to refine the procedures and include full employee planning and implementation. Every successful hazardous materials reutilization store has taken a cautious, deliberate approach to their clients.

• **Management's commitment must be strong.** JIT will uncover supply defects that were not apparent with large inventories on hand. A consistency of purpose is mandatory here.

If we think more of inventory or materials rather than hazardous materials on the authorized use list with particular volatile organic compounds, the task of hazardous materials minimization seems a little less formidable. If we can reduce hazardous materials minimization to just another inventory system, we can much more easily solve the operational stumbling blocks that have plagued some past efforts.

Finally, we can study the approaches, develop the inventory system best suited to our activities' needs, and implement the system without examining every conceivable combination of possible pitfalls. ❑

CDR Dennis J. Sobota is the executive officer of the Reserve Division, Naval Facilities Engineering Command's Environmental Engineering Unit Atlantic. He is a registered Professional Engineer in Virginia, Maryland and Pennsylvania.

The restored Vice President's house.

EFA Chesapeake Restores Vice President's House

By Kathleen Sampson

The 100-year-old house at the United States Naval Observatory that is the residence of Vice President Al Gore, his wife, Tipper, and their four children, is in much better repair these days thanks to the Navy.

While former Vice President Dan Quayle and family lived in the house, they encountered chronic plumbing, heating, air conditioning and electrical problems. The Quayles' concern over the need for extensive repairs led to the assignment of Engineering Field Activity Chesapeake (then Chesapeake Division), Naval Facilities Engineering Command, as the "landlord in charge." A thorough inspection and study conducted by the field division in 1992 confirmed the Quayles' suspicions that a major structural, electrical and mechanical overhaul was needed. But, to perform the necessary repairs required the house to be vacated for approximately six months.

The change of administrations following the last presidential election provided just the opportunity that EFA CHES needed. Since the Gores already had a home in nearby Arlington, Va., they agreed to delay moving into their new home until June 1993. At that point, the "race was on" to complete the required repairs—including design—on the 12,000 square foot structure in less than five months.

Lieutenant Michael S. Bowers, CEC, USN, the facility manger for the residence, was designated the officer in charge of construction for what was believed to be the Navy's largest change-of-occupancy rehab. "The design work began in late January 1993, right after the inauguration," said LT Bowers. "Two contracts were awarded in early February—one to historically restore the wrap-around veranda and one for the extensive mechanical and electrical repairs. Despite numerous unforeseen conditions and a few customer requested modifications, all work on both contracts was completed by June 30, and the second family moved in right on schedule the first of July."

LT Bowers said many electrical panels were replaced and consolidated in a central electrical room to conform with current safety code requirements. "A new sprinkler system was installed to correct fire code discrepancies, and in the basement, the remaining asbestos-contained pipe insulation was removed," he said. An improved exit from the basement was also constructed.

The last time major improvements were made to the structure's mechanical systems was in the 1940s. Now, 50 years later, the heating, hot water and cooling systems were replaced throughout the house, consolidating mechanical equipment to two locations—the basement and the attic.

LT Bowers related how Mrs. Quayle was concerned that it took seven minutes to get hot water to the third floor bathrooms, but "through the incorporation of a recirculating loop system, that problem has been totally eliminated."

The house is a Queen Anne style three-story brick and wood framed structure with a slate roof. The main entrance has a veranda, or porch, that wraps around the southeast portion of the house.

Commander Glenn R. Smith, CEC, USN, EFA CHES executive officer, said, "The veranda suffered extensive deterioration due to dry rot and the action of carpenter bees. You could literally poke your finger through some of the columns."

The exterior repairs required com-

Kathleen Sampson is the public affairs officer at Engineering Field Activity Chesapeake in Washington, D.C.

pliance with the National Historic Preservation Act and close communication with the national Advisory Council on Historic Preservation. "To best accomplish this intricate restoration, we elected to go with a separate contract, awarded through a source selections process," said CDR Smith. "The first-class, outstanding results have certainly validated that course of action."

Some functional problems in the private living areas of the house were corrected. Adequate closet space was added, and "his and hers" bathrooms were modernized off the master bedroom suite.

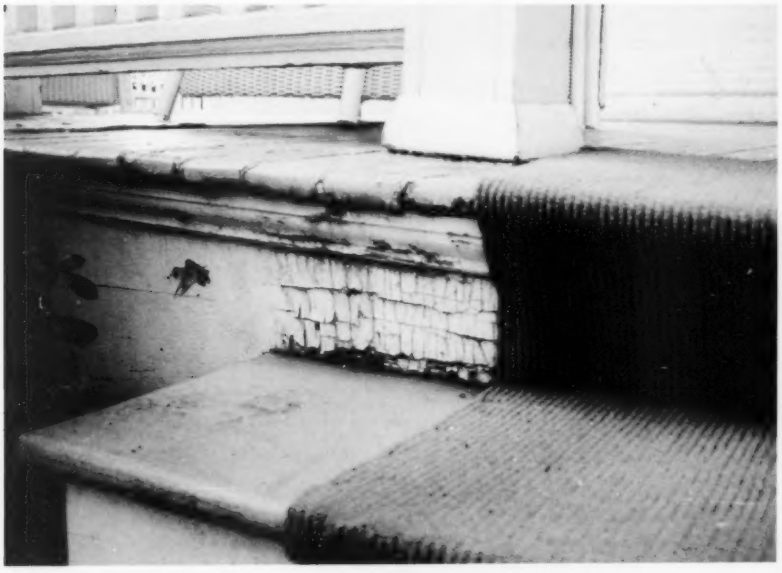
To provide private living space for the family separate from the formal first floor room frequently used for entertaining, a guest room and bathroom on the second floor were converted to a family room and kitchenette.

From start to finish, the $1.6 million project was a whirlwind time for LT Bowers, his staff, Ken Key and Bruce Wallace, and the contractors. "As with many old houses, unforeseen problems arose and we had to take care of them in addition to the scheduled work," said LT Bowers. "There were several structural repairs to load-bearing brick walls where duct penetrations had been made, but without a header to carry the load. Other surprises included rotted kitchen windows, a blocked sewer line and unstable soil conditions under the veranda."

The contractors for renovation were Tuckman-Barbee Construction Company, Inc., Washington, D.C.; Siegfried Construction, Vienna, Va. (veranda); and Einhorn, Yaffee and Prescott, Washington, D.C. (architects).

Vice President and Mrs. Gore requested some decorative changes to accommodate their tastes and life style. This additional work was financed by donated funds provided through the Office of the Vice President. Now that the house has been brought up to current standards, the house will be safer and more efficient for vice presidential families well into the next century. ❑

The veranda steps, pictured here before restoration, show deterioration due to dry rot and carpenter bees.



History of the House

The residence of the vice president is located on the Naval Observatory grounds in northwest Washington, D.C. It not only serves as a home for the vice president and his family, but also as a facility to host official state functions.

Designed by a local Washington architect Leon Dessez, the house was under construction from 1891 until 1893. It was designed to be the residence of the superintendent of the Naval Observatory. Twelve superintendents lived in the house from 1893 through 1927. In 1928, it became the home of the Chief of Naval Operations and was known as the Admiral's House.

The house became the temporary official home of the vice president of the United States in 1974. The Nelson Rockefellers were the first to occupy the house, followed by the Walter Mondales, the George Bushes and the Dan Quayles. It is now the official residence of Vice President Al Gore and his family.

It is a Queen Anne style three-story brick and wood framed structure with a slate roof. The main entrance has a porte-cochere and a veranda that wraps around the southeast corner of the house. The entry level spaces include a foyer, living room, dining room, library and administrative offices. The second and third levels have four bedrooms, a family room, an office, kitchenette and the master-bedroom suite.

Northern Viking 93: The Seabees Were There!

By CDR Daniel L. Grigsby, CEC, USN

Every two years, Northern Viking—a joint Army, Navy, Marine Corps, Air Force, and Coast Guard exercise—takes place near the Arctic Circle in the North Atlantic. In Northern Viking 1993, which was held in Iceland during two weeks in July and August, more than 850 reserve military personnel were flown in from the continental United States to augment the 2,875 active duty personnel assigned to Iceland. In a joint effort, the active and reserve forces successfully defended Iceland against all aggressors.

Naval Construction Force reserve components included elements of the Seventh Naval Construction Regiment (NCR) and Naval Mobile Construction Battalion (NMCB) 13. The regimental staff participated in command post and logistics exercises with the Icelandic Defense Force staff, a joint service command reporting to Commander in Chief, U.S. Atlantic Fleet. Their responsibilities included command and control over actual and simulated public works departments and NMCBs.

CDR Daniel L. Grigsby is the public works officer at Naval Air Station Keflavik in Iceland.

The Seabees, with their equipment and tools, hit the ground running upon arrival in Iceland. They never stopped until they were on board their outbound C-141 plane.

The Seabees made improvements at the Navy Exchange and constructed a bachelor officers quarters parking lot. These highly visible quality of life improvements will protect personnel and their vehicles from the wet and windy Keflavik winters, where winds often exceed 50 mph. The exterior of the Navy Exchange was improved with a new raised street crossing, curbing and a geothermally heated walkway. Congested parking adjacent to the front entrance was eliminated.

Seabees construct a geothermally heated walkway outside the Navy Exchange.

In support of the Chief of Naval Operations commitment to improve the quality of housing for military personnel, a bachelor officers quarters parking lot was constructed. In prior winters, officers' privately owned vehicles, parked on the sides of roads, were often in the way of snow removal equipment, raising the potential for damage to both the equipment and the vehicles.

The Seventh NCR took charge of all Naval Construction Forces in Iceland by operating a 24 hour-a-day Base Survivability and Recovery Control Center (BSRCC). During simulated attacks, the BSRCC made sure airfield pavements received rapid runway repairs, which allowed P-3C Orion and F-15 Eagles to land and take off. Maintaining a viable operating airstrip was essential to the ability of Commander Fleet Air Keflavik and the U.S.A.F. 35th Wing to accomplish their missions of anti-submarine warfare and the air defense of Iceland.

After rapid runway repair work was completed, damage assessment teams inspected airfield and building damages. The BSRCC then assigned repairs to public works departments and NMCB units. NMCB units were later assigned mobilization projects to prepare Naval Air Station Keflavik as a staging point for the resupply of the European

Extensive design and material procurement efforts were undertaken to make sure that the work accomplished was not only beneficial to the Keflavik community but would provide meaningful training for the Seabees.

theater. Finally, the Seventh NCR helped oversee the work being done by NMCB 13 at the Navy Exchange and bachelor officers quarters.

Public works department civilian support was crucial in supporting the efforts of the Seabees. Extensive design and material procurement efforts were undertaken to make sure that the work accomplished was not only beneficial to the Keflavik community but would provide meaningful training for the Seabees.

Working in areas bounded by utilities, sidewalks, streets and other facilities, the Seabees were able to practice contingency construction skills. Additionally, this work honed skills needed to perform rapid runway repairs to craters in airfield pavements.

The weather for Northern Viking 1993 was cold, wet, windy, sunny, warm, and filled with daylight 20 hours a day. As the saying goes in Iceland: "If you don't like the weather, wait 15 minutes." Northern Viking 1993 was a success for all the multiservice participants, especially the military and civilian engineering and construction forces.

The real winners though, are the residents of NAS Keflavik, who in the winter can perform their real world mission in an environment of increased safety, security and with an improved quality of life. ❑

RADM Dames to Get Second Star

Rear Admiral Thomas A. Dames, CEC, USN, has been selected for promotion to the permanent rank of rear admiral (upper half).

RADM Dames is currently serving as Commander, Atlantic Division, Naval Facilities Engineering Command in Norfolk, Va. He assumed that position in November 1992, having previously served for two years as commanding officer of the Northern Division, NAVFAC, in Philadelphia, Pa.

Richard V. Thomas Is Named NAVFAC Engineer of the Year for 1994

Richard V. Thomas was named the Naval Facilities Engineering Command Engineer of the Year for 1994. His noteworthy accomplishments in the field of petroleum engineering have directly improved support to the joint U.S. forces and our allies. Thomas is a consultant for petroleum fuels and energy at the Naval Facilities Engineering Service Center, East Coast Detachment in Washington, D.C.

CAPT Spore to Get Moreell Medal

Captain James T. Spore, CEC, USN, has been selected to receive the Moreell Medal for 1993. The award is given annually by The Society of American Military Engineers in recognition of the most outstanding contribution to military engineering.

The award is given to CAPT Spore in recognition of his remarkable performance as the Officer in Charge of Construction East Africa in support of Operation Restore Hope in Somalia from December 1992 to May 1993. His personal accomplishments in Somalia had a dramatic impact on the success of both the United States and the United Nations operations in Somalia; and his pioneering achievements in refining and successfully executing the Logistics Civil Augmentation Program concept will be molded into our nation's mobilization readiness doctrine of the future.

CBC Davisville, the Original Home of the Seabees, Is Disestablished

A bit of Seabee history drew to a close when Construction Battalion Center Davisville, R.I., was disestablished at a ceremony on March 25. The ceremony also honored CBC Davisville, the original home of the Seabees, for its 52 years of service to America.

CBC Davisville was on the BRAC 1991 list of base closures. On April 1, CBC Davisville went into caretaker status under the Northern Division, Naval Facilities Engineering Command. ❑

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PWC Recipe...

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established. Personnel were officially transferred and operations commanded after a brief ceremony on Oct. 1.

After our first full year, the transitions and adjustments have not been problem free, but positive results have already been achieved. The center, in addition to spending less than initially anticipated, is operating with a lower overhead rate and fewer than we originally forecasted.

Consolidation of separate transportation pools has reduced our overall inventory. More responsive engineering and contracting procedures have drawn praise from our customers, and have attracted new "walk-in" customers.

Of course, we have opportunities for improvement With PWC Washington's 900-plus member team, we're dedicated to seizing these opportunities.

Like most recipes for success, PWC Washington depends not so much on the raw ingredients, but the care that is taken in preparation. ❑

PWC Genesis...

Continued from page 20

sponse expectations has been a significant step forward.

Everyone at PWC Jax has worked exceptionally hard as a team and has come to realize that "none of us is as smart as all of us." Personal and corporate growth has been far more than any individual. There are, however, many challenges still on the plate. One measure of success will be, at the five year point, that customers wonder how they ever survived without a PWC. ❑

Attention all engineering students!

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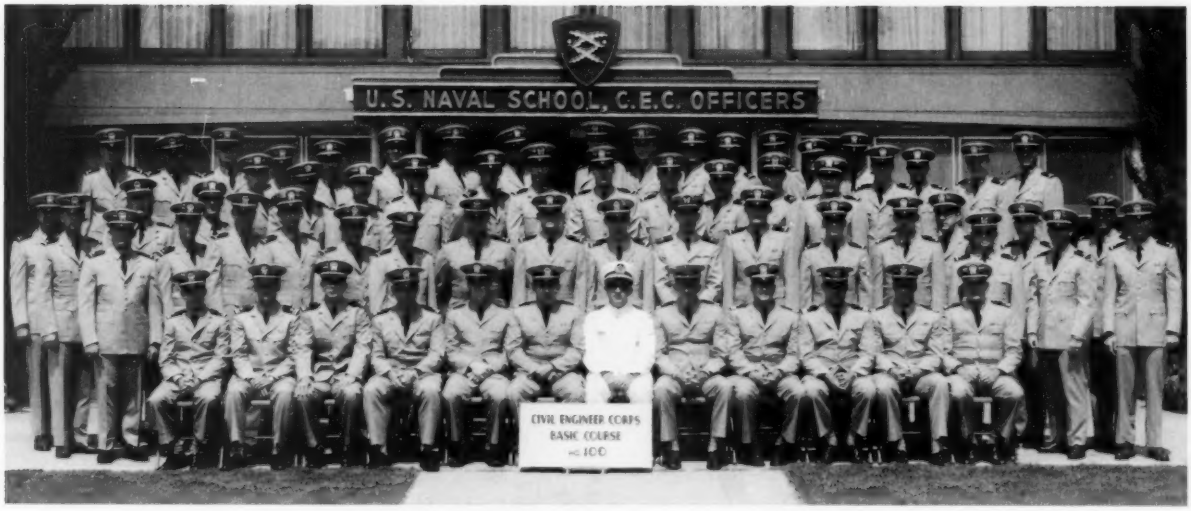

CECOS Basic Class 100

Sept. 6, 1968

First row, from the left: LTJG Colin J. Gilboy, LTJG James W. Gossett, LTJG James K. Gardner, LTJG Leon J. Sleight, LT William L. Forestell, LT James A. Haugen, LCDR Muzaffer Ozdenler, LT Ronald I. Gregg, LT William L. Covington, LT Fredrick S. Hall Jr., LT John G. Ariko Jr. and LTJG Ted D. Stikeleather.

Second row: ENS George T. McDaniel, ENS Stephen B. Griffin, ENS Dennis R.J. Burns, ENS Robert G. O'Brien, ENS James P. Kovalcik, ENS Michael E. Teal, ENS Robert R. Rice, ENS Frank J. Koiro Jr., ENS Thomas R. Rampe, CWO1 Ronald E. Vietmeier, ENS Lee A. Rulis, ENS William S. Burns Jr., ENS George L. Long, ENS Robert L. Bellafronto, ENS Donald D. Reefe, ENS David C. Gleason, ENS George E. Casey Jr., ENS Dean K. White and ENS Jerauld L. Dickerson.

Third row: ENS Sammy Saltoun, ENS Thomas F. Thorstenson, ENS Patrick R. McDougal, ENS Dennis L. Willaman, *, ENS Kenneth Vogel, ENS Robert Michalski, *, *, ENS Don G. Fitton, *, ENS David L. Simpson, ENS Samuel P. Hunter Jr., ENS Robert B. Hunter, ENS Stewart A. Dickson, ENS Joseph C. Penell, ENS Ronald R. Rogillio, ENS Dean C. Bernett, ENS Morris A. Fraley Jr.

Fourth row: ENS Richard M. Norman, ENS Jerry L. Collier, *, *, ENS Peter W. Marshall, ENS Joel N. Wolk, ENS Frederick S. Messick Jr., ENS Albert B. Hall III, ENS Theodore H. Dwyer Jr., ENS William J. Hughes, ENS William A. Smith III, ENS John C. Fernau, *, ENS William J. Strang and ENS Peter A. Kopac.

Absent: LT James E. Weston.
* Unidentified ensigns: ENS Joseph T. Farina, ENS Douglas O. Gausman, ENS Thomas W. Harrison, ENS Edmund L. Rogers, ENS Thomas W. Seigle Jr., ENS Gary B. Tyler and ENS John D. Hughes.

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